

Adherence to Antenatal Screening Recommendations for HBV and HIV

Preliminary Results from Birthnet 2

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Outline

- Overview of Birthnet
- Objectives
- Study Design
- Preliminary Results
- Additional Information Collected
- Future Analyses

Perinatal Disease Prevention, 1990s

- Prevention Programs
 - Hepatitis B
 - Early-onset perinatal GBS
 - HIV
- Elimination Programs
 - Congenital syphilis
 - Congenital rubella syndrome
- Measure prevention practices
 - Review L&D records

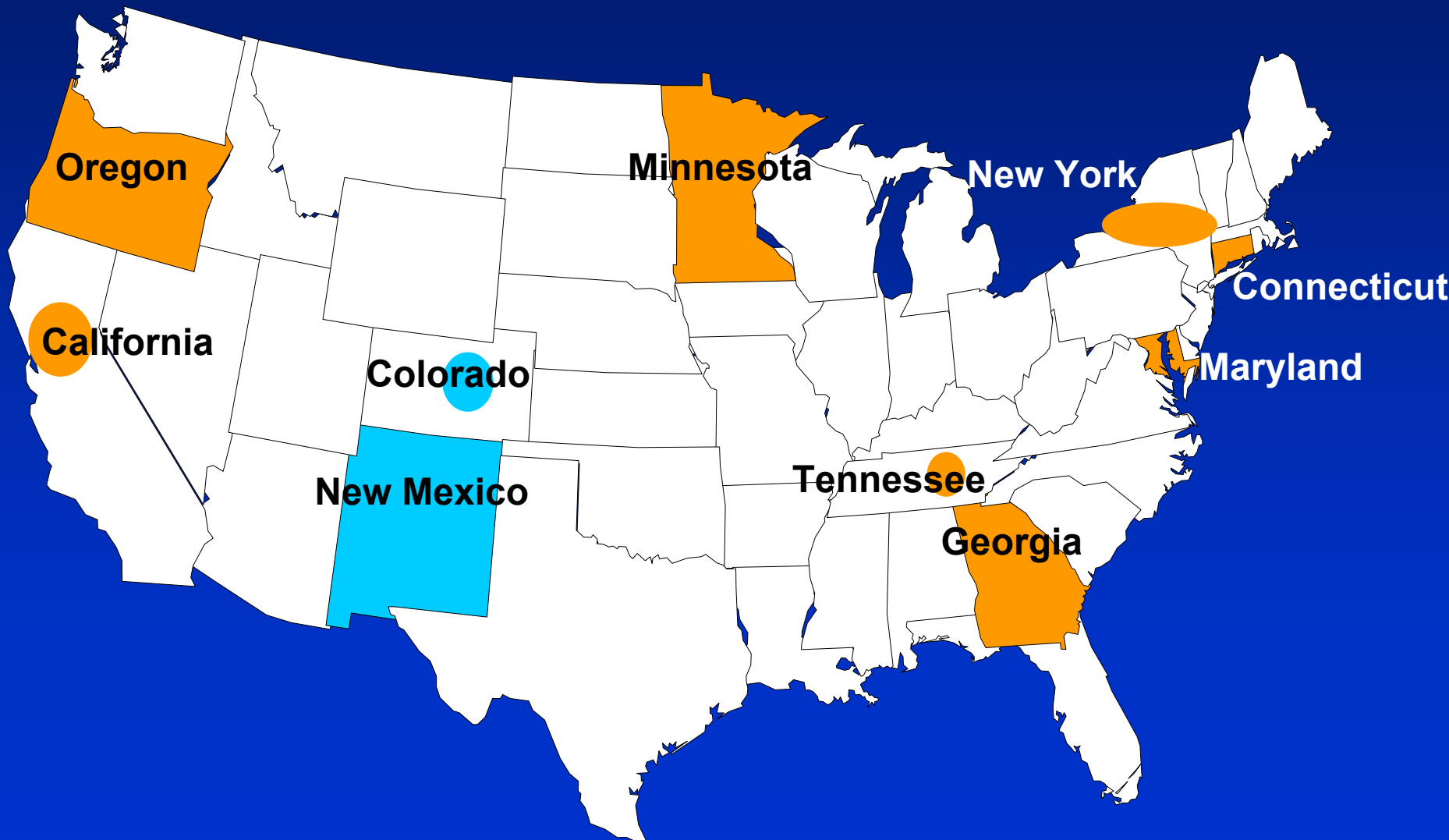
Birthnet 1

- Reviewed 5,144 labor and delivery records, a sample of ~ 600,000 live births for 1998-1999 residents of ABCs sites
 - Evaluate perinatal GBS prevention guidelines
 - Assess compliance with antenatal infectious disease prevention guidelines
- Results
 - Revised guidelines for preventing perinatal GBS disease
 - Decline in early-onset GBS disease

Objectives of Birthnet 2

- Review 7,600 L&D records, a sample of ~ 800,000 live births for 2003-2004 among residents of ABCs sites
 - Characterize adherence to antenatal screening recommendations
 - Examine risk factors for failure to adhere to screening recommendations
 - Develop tool that can aid states or other groups interested in evaluating perinatal disease prevention activities

Active Bacterial Core Surveillance (ABCs)



ABCs, 1998-1999 vs. 2003-2004

Surveillance Site	1998-1999	2003-2004
California	3 counties	no change
Connecticut	state	no change
Georgia	20 counties	no change
Maryland	state	no change
Minnesota	7 counties	no change
New York	7 counties	15 counties
Oregon	3 counties	no change
Tennessee	5 counties	11 counties
Colorado	N.A.	5 counties
New Mexico	N.A.	state (2003 only)

Study Design

- Sampling
 - All births of infants with invasive GBS sampled with a probability of one
 - Stratified random sample of births drawn from birth registry
 - Surveillance area, birth year, birth hospital
- Statistical Analysis
 - Data weighted according to probability of chart selection
 - Weighted analysis to be reported for proportions and population means

Sample of Information Collected

- HBV
 - Prenatal testing: timing, repeated, result
 - Source of HBsAg result: handwritten, lab report, other
 - Documentation of birth dose
- HIV
 - Prenatal testing: offered/refusal, timing
 - Type of HIV test
 - Testing on admission

Maternal Characteristics

	Percentage † N = 7,661
Age < 20 years	10
<i>Race</i>	
White	58
Black	17
Asian	5
Unknown	17
<i>Ethnicity</i>	
Hispanic	17
Non-Hispanic	32
Unknown	51
At least one prenatal visit	98
History of drug use	3.4
Medicaid payment of L&D	28

*Birth registry
will be used to
complete
unknown
race/ethnicity*

† Unweighted

HBV Screening

- 96.5%[†] recorded receiving HBsAg test
 - Ranged from 95.3-99.0%
 - Same proportion[‡] reported in 1998-1999 cohort
- Source of HBsAg Results
 - Prenatal HBsAg result (N=7,148)
 - 86.6% Handwritten
 - 11.8% Lab report
 - HBsAg result for tests upon admission (N=198)
 - 24.2% Handwritten
 - 71.7% Lab report

† Unweighted

‡ Weighted

HIV Screening Recommendations

- 2001 Recommendations †
 - Voluntary testing for all women at 1st prenatal visit with informed consent
 - Documentation of consent should be included in records
- 2006 Recommendations ‡
 - All women should be tested as early in pregnancy as possible as part of routine panel of prenatal tests (option to opt-out)

† Revised recommendations for HIV screening of pregnant women. MMWR Recomm Rep. 2001 Nov 9;50(RR-19)

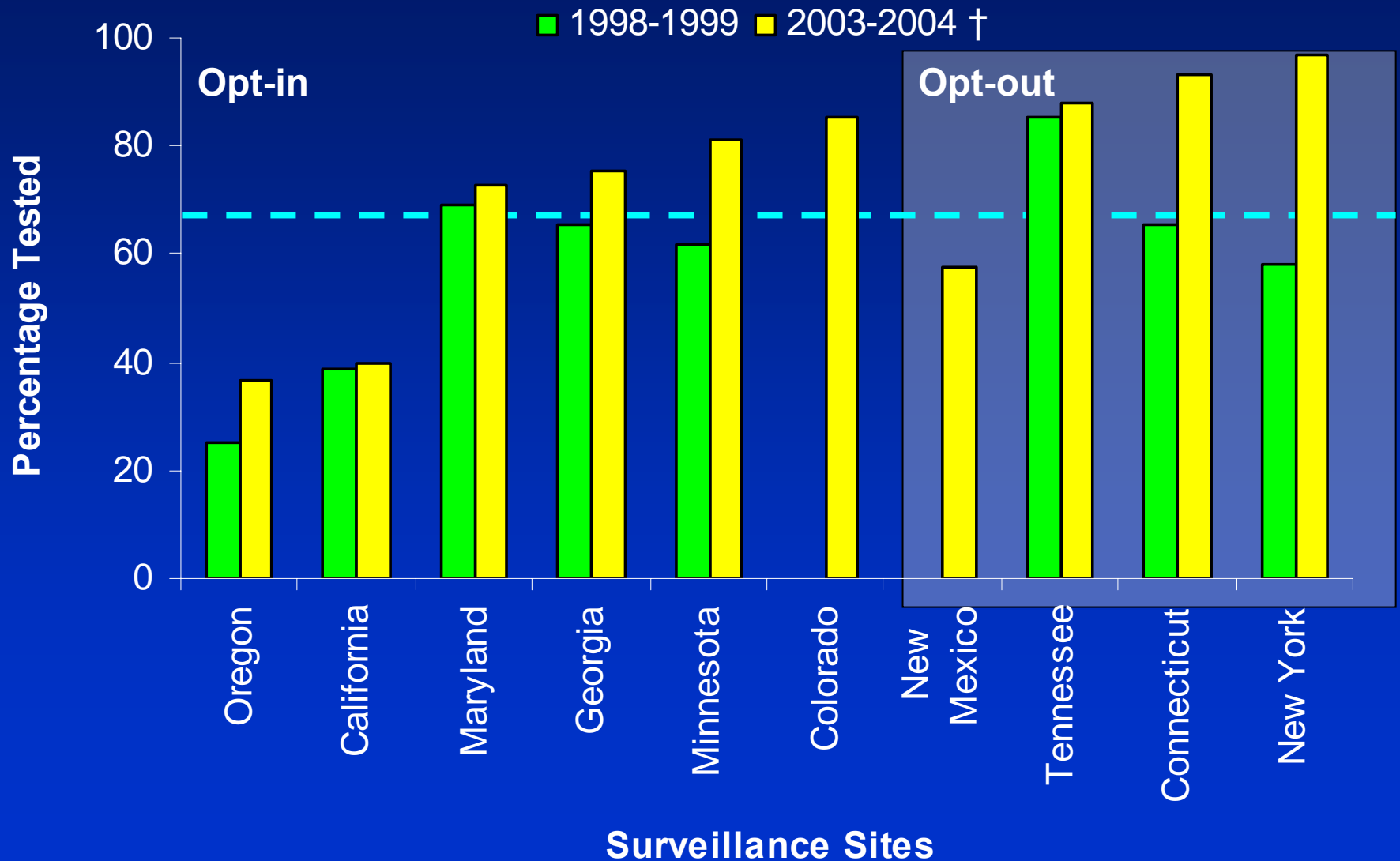
‡ Sexually transmitted diseases treatment guidelines, 2006. MMWR Recomm Rep. 2006 Aug 4;44(RR-11)

HIV Testing Mandates, 2004

	Pregnant Women	Approach
California	Must be offered HIV test	Opt-in
Colorado	Voluntary testing	Opt-in
Connecticut	Must be tested at admission for delivery	Opt-out
Georgia	Voluntary testing	Opt-in
Maryland	Must be offered HIV test	Opt-in
Minnesota	Voluntary testing	Opt-in
New Mexico	Must be informed HIV test is part of routine prenatal screening	Opt-out
New York	Must be tested at admission for delivery	Opt-out
Oregon	Voluntary testing	Opt-in
Tennessee	Must be tested	Opt-out

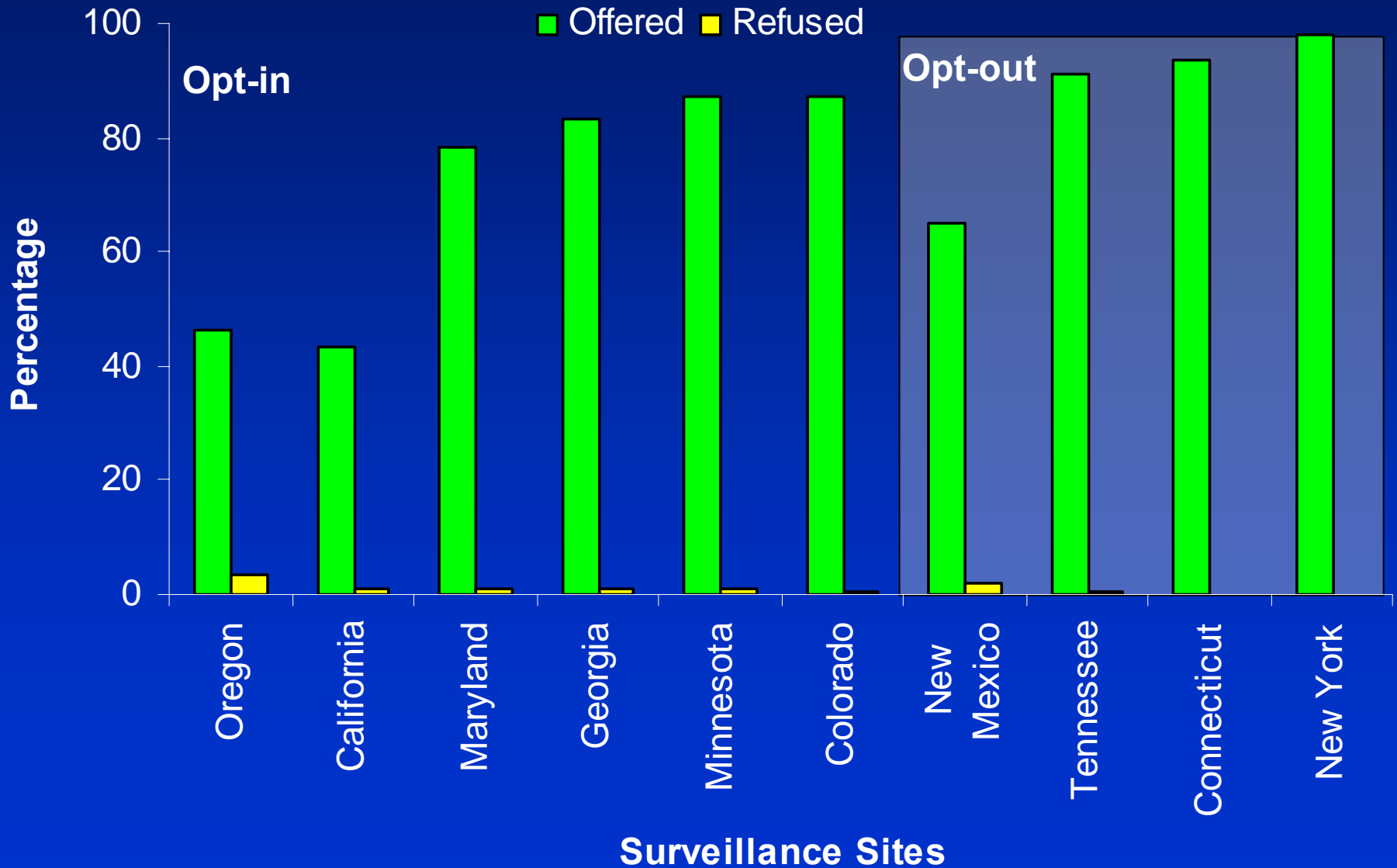
<http://www.statehealthfacts.org/cgi-bin/healthfacts.cgi?action=compare&category=HIV%2FAIDS&subcategory=HIV+Testing&topic=HIV+Testing+for+Mothers+and+Newborns>

HIV Testing ≥ 2 d Before Delivery



† Unweighted data; differences in surveillance areas previously described

HIV Testing Documentation



Other Information Collected

- Timing and results of prenatal testing for:
 - GBS
 - Syphilis
 - Rubella
 - *Chlamydia trachomatis*
 - Gonorrhea
 - Bacterial Vaginosis

Future Analyses

- Determine the proportion of women screened for other perinatal infections
- Assess adequacy of prenatal care using Kessner Index
- Examine/collaborate on state-specific and pathogen-specific results
- Evaluate adherence to GBS screening/prophylaxis guidelines
- Explore risk factors for late-onset GBS and non-GBS sepsis

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Additional Tables

Maternal Screening

	Percentage	
	1998-1999 N = 5,144 (weighted)	2003-2004 N = 7,661 (unweighted)
Any HBsAg test	96.5	96.5
HBsAg test at admission only	1.7	1.7
HBsAg positive	0.35	0.54
Any HIV test ≥ 2 d before delivery	57.2	74.4
HIV test at delivery only	1.1	1.1
Any syphilis test	98.2	95.6
Syphilis test at admission only	2.7	2.3
Syphilis positive	0.70	0.29
Any GBS culture ≥ 2 d before delivery	52.0	82.8
GBS positive	23.6	20.7

Site-Specific HBV Testing

Surveillance Area	1998-1999			2003-2004 ‡		
	Tested	Adm only	HBsAg Positive	Tested	Adm only	HBsAg Positive
California	99.0	0.8	0.69	97.5	1.1	0.75
Colorado	-	-	-	97.1	1.0	0.16
Connecticut	95.8	0.3	0.13	94.6	0.4	0.35
Georgia	95.3	1.1	0.06	95.2	3.5	0.31
Maryland	95.5	3.9	0	94.5	2.8	0.55
Minnesota	97.9	1.2	0.38	98.2	0.3	0.97
New Mexico	-	-	-	97.7	3.8	0.00
New York	98.0	0.4	0.45	98.6	0.1	0.37
Oregon	98.8	0.2	0.94	99.2	0.3	1.12
Tennessee	95.3	4.0	0.95	94.5	2.8	0.81

‡ Unweighted data; differences in surveillance areas previously described

Site-Specific HIV Testing

Surveillance Area	1998-1999		2003-2004 ‡	
	≥ 2 d before delivery	Delivery only	≥ 2 d before delivery	Delivery only
California	38.5	0.3	39.6	0.3
Colorado	-	-	85.6	1.0
Connecticut	65.7	2.1	93.2	0.8
Georgia	65.7	0.5	75.3	2.7
Maryland	69.1	1.5	73.0	2.0
Minnesota	61.7	0.8	81.0	0.3
New Mexico	-	-	57.4	0.5
New York	58.0	0.6	97.1	1.0
Oregon	25.3	0.2	36.4	0.0
Tennessee	85.3	2.0	87.7	1.2

‡ Unweighted data; differences in surveillance areas previously described

HIV Testing Documentation

	Total	Test Offered	Offered / Total	Test Not Refused	Not Refused / Offered
California	669	289	43.2	266	92.0
Colorado	626	547	87.4	536	98.0
Connecticut	858	803	93.6	798	99.4
Georgia	979	814	83.1	744	91.4
Maryland	905	707	78.1	656	92.8
Minnesota	721	630	87.4	585	92.9
New Mexico	608	395	65.0	353	89.4
New York	804	786	97.8	782	99.5
Oregon	623	287	46.1	227	79.1
Tennessee	868	790	91.0	771	97.6

** Unweighted data